

ON *PARACALOCARIS SAGAMIENSIS*, A NEW
GENUS AND SPECIES FROM JAPAN
(DECAPODA: THALASSINIDEA: AXIIDAE)

Katsushi Sakai

Abstract.—A new genus and species of the family Axiidae, *Paracalocaris sagamiensis*, collected from Sagami Bay, Japan, and previously reported as *Calocaris* (*Calocaris*) *granulosa* Grebenyuk, is described. *P. sagamiensis* cannot be placed in either *Calocaris* or *Lophaxius* based on the eye, as it is triangular with dorsally upraised, unpigmented cornea, on the unarmed anterolateral margin of the carapace, and on the 2-segmented pleopod 1, with the distal segment distally trilobed. *Calocaris* (*Calocaris*) *granulosa* is transferred to the new genus, and along with *P. sagamiensis*, placed in the family Axiidae.

From among the material of deep-sea Decapoda Crustacea collected in crab traps by H. Ikeda of Hayama Municipal Museum, Japan, a most interesting axiid specimen was kindly sent to me for study. This specimen, though closely related to *Calocaris* (*Calocaris*) *granulosa* Grebenyuk, from Alaska, differs in various points, and is described as *Paracalocaris sagamiensis* new genus and species. *Calocaris* (*Calocaris*) *granulosa* is transferred to the new genus, and along with *P. sagamiensis*, placed in the family Axiidae.

The following abbreviations are used in this paper; CL, carapace length including rostrum; TL, total length of body; USNM, National Museum of Natural History, Smithsonian Institution, Washington, D.C.; SMF, Forschungsinstitut Senckenberg, Frankfurt am Main, W. Germany.

Family Axiidae Huxley, 1878

Paracalocaris, new genus

Diagnosis.—Hermaphroditic. Carapace with anterolateral margin unarmed; post-cervical carina entire. Rostrum elongate, at distinctly lower level than anterior carapace; rostral margins armed. Median carina entire; submedian carina absent; lateral ca-

rina extending only short distance posterior to rostrum, armed with one or two spines. Eyestalk not mesially contiguous; cornea unpigmented, upraised or not. Antennal acicle short, situated mesial to dorsodistal spine of segment 2. Maxillipeds 1-3 with exopods and epipods; small podobranch on maxilliped 2; large podobranch on maxilliped 3.

Pereopods lacking exopods; epipods on pereopods 1-4; large podobranch on pereopods 1-3; pleurobranchs absent. Pereopod 1 with chelae subequal; anterior margin of palm armed. Pereopod 2 chelate.

Pleopod 1 2-segmented, distal segment expanded, distally trilobed, with patch of hooks on mesiodistal lobe. Pleopod 2 with endopod lacking distal portion, slender appendix masculina of single article, with appendix interna articulating at its base.

Telson longer than wide, with two dorsal rows of non-articulating spines. Uropodal exopod with transverse suture.

Etymology.—The generic name is derived from the Greek “para,” a prefix meaning “near,” plus the generic name “*Calocaris*.” Gender: feminine.

Type species.—*Paracalocaris sagamiensis*, new species.

Species included.—*Paracalocaris saga-*

miensis, new species, and *Calocaris* (*Calocaris*) *granulosa* Grebenyuk, 1975.

Remarks.—The present new genus *Paracalocaris* is similar to *Calocaris* Bell, 1853, and *Lophaxius* Kensley, 1989, in being hermaphroditic, and having a post-cervical carina on the carapace; the pleopod 2 with a slender appendix masculina and a free appendix interna (Fig. 5D); and lacking pleurobranchs on thoracic somites 2–4. However, *Paracalocaris* differs in several characters from *Calocaris* and *Lophaxius*. In *Calocaris*, as exemplified by its type species, *C. macandreae* Bell, 1853, the anterolateral margin of the carapace has a spine; the eyes are mesially contiguous; the antennal acicle is reduced; the maxilliped 2 bears a reduced podobranch with a few gill filaments; and pleopod 1 (Fig. 5C) consists of two segments, the distal segment being expanded in the form of a lobe, and with a patch of hooks on small mid-terminal margin. In *Paracalocaris*, the anterolateral margin of the carapace is unarmed; the eyes are not mesially contiguous; the antennal acicle is short; the maxilliped 2 has a large podobranch; and the pleopod 1 is made of two segments, the distal segment being expanded, trilobed, and with patch of hooks on mesial lobe (Fig. 5A). In *Lophaxius* the eyes are not mesially contiguous; the antennal acicle is short; and the maxilliped 2 has a large podobranch (Kensley 1989:962), as in *Paracalocaris*. However, *Lophaxius* differs from *Paracalocaris* and *Calocaris*, in that the anterolateral margin of the carapace has a spine; the pereopod 2 is subchelate; and the pleopod 1 consists of two segments, the distal segment being spatulate with a small mesial patch of hooks (Kensley 1989:962).

Grebenyuk's species, *Calocaris* (*Calocaris*) *granulosa* is also placed in *Paracalocaris*. This species has a small antennal acicle; the eyestalk is flattened, but the cornea is not upraised as *P. sagamiensis*; and pleopod 1 is 2-segmented, the distal segment being distally trilobed (Grebenyuk 1975: figs. 1–5).

Paracalocaris is here treated under the family Axiidae following Sakai & de Saint Laurent (1989:11).

Paracalocaris sagamiensis, new species
Figs. 1–5

Calocaris (*Calocaris*) *granulosus*.—Sakai, 1987:300.

Material examined.—1 ♀, holotype, TL = 81 mm, CL = 31 mm, USNM 231420, off Ohiso, Sagami Bay, Japan, 250–280 m, crab trap, 3 Apr 1984; H. Ikeda, coll.

Diagnosis.—Hermaphroditic. Rostrum styliform, with three marginal spines, margins shortly extending posteriorly onto gastric region; lacking submedian carina, but with post-cervical carina on carapace. Eye triangular with obtuse tip, bearing upraised cornea without pigments. Pereopods 1 subequal, palm with dorsal row of prominent spines; pereopod 3 with propodus elongate, ventrolaterally without transverse rows of spines. Pleurobranchs absent. Pleopod 1 composed of two segments, distal one distally trilobed.

Description.—Hermaphroditic, Rostrum (Fig. 1A, B) styliform, with three marginal spines; tip acute. Carapace compressed, with scattered rounded tubercles; anterolateral margin unarmed. Cervical groove dorsally distinct, ventrolaterally indistinct. Gastric region anteriorly arched to rostrum, lateral carina short, with strong spine, anteriorly continuous with lateral margin of rostrum; submedian carina absent; median carina extending from base of rostrum to posterior margin of carapace, armed with median tubercles.

Eye peduncles (Fig. 1C) small, thick, less than one-fourth length of rostrum, distally triangular with obtuse tip; cornea small, poorly defined, not pigmented, upraised. Antennular peduncle slightly shorter than rostrum; segment 1 as long as segments 2 and 3 combined, its dorsal surface medially concave in proximal half to accommodate eye; dorsolateral flagellum 23 mm long,